

THRU : Chief, Intelligence Information Staff, ORR
Chief, Industrial Division, ORR

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Chief, Producers' Equipment Branch, ORR

Requirements on [REDACTED] 25X1A5a1

The following requirements are placed on [REDACTED] 25X1A5a1

Information has been received that East Germany has developed a new technique in manufacturing blades for gas turbines. The blades, which are hollow, are made by a press forging technique (fliesspressverfahren). This process is allegedly not employed in Western industrial countries but is more economical than the "stretcher-leveling system" customarily used in British industry. The VEB Goerlitz Maschinenbau which is now manufacturing gas turbines in East Germany was to have introduced this process for the mass production of gas turbine blades in 1956.

Requirements:

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Can [REDACTED] elaborate on the technique? Was the technique developed in East Germany or in some other country? Are other countries making use of this process, in particular, the U.S.S.R.? Are blades of this design used in steam turbines? Is the VEB Goerlitz Maschinenbau the sole producer of gas turbines in East Germany? What scientific-research institutes are carrying out research in this field? What is the size of their staffs?

The development of ceramic blades for gas turbines has received considerable attention in East Germany with several plants engaged in research in this field

Requirement:

What plants are now engaged in research on ceramic blades? Have such blades been installed in turbines and tested? What are the results of the testing? [REDACTED] foresee the widespread use of ceramic turbine blades in the future? 25X1A5a1

East Germany has produced an experimental 4,000 hp industrial gas turbine. Currently, a 4,500 hp single-shaft gas turbine is under development in Dresden and a 1,500 hp experimental model is being produced by the VEB Goerlitz Maschinenbau. All of these turbines are presumably for industrial use.

SUBJECT: Requirements on [REDACTED]

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Requirements:

Are these turbines designed to produce electricity for the industrial facility or mechanical energy directly, without the intermediary of an electric motor? Has East Germany produced or does it plan to produce electrical energy using gas turbines as the USSR has done at the Shatskiy Electric Power Station ("Podzemgas"), where a 12,000-kw gas turbine is installed? Has there been technical assistance given to or rendered by the USSR in this field? What official or unofficial means exist for consultation between engineers and for the exchange of technical data among bloc countries? Does CEMA organize exchange programs of a technical nature? Has CEMA exerted any influence on the selection of research topics for East German institutes?

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